

Quantification of brain infarct volume

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An abbreviated version of this protocol was published in Journal of Neuroinflammation in Sep 2019

Preactivation of Notch1 in remote ischemic preconditioning reduces cerebral ischemia-reperfusion injury through crosstalk with the NF-κB pathway

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Detailed protocol

Thank you for your interest in this research.

The following is the specific protocol to calculate the volume of cerebral infarction:

The brain tissue is taken out and placed in a brain mold, and then cut into 5 slices with a thickness of 2mm/slice continuously through the coronal plane, and then stained with TTC, then fixed with 4% paraformaldehyde for 24 hours, and absorb the surface water with absorbent paper Stains, and finally put it into the scanner to scan and access the picture. Analyze the pictures with Image J software to calculate the area of cerebral infarction and normal tissue, and use the following formula to calculate the percentage of cerebral infarction volume:

Hemisphere volume=[(front area+reverse area)/2]×slice thickness.

Percentage of total brain infarct volume=(\sum (contralateral normal tissue volume-ipsilateral normal tissue volume))/(\sum contralateral normal tissue volume)×100%

How to cite:(Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. liang, w. and Lin, C. (2021). Quantification of brain infarct volume. Bio-protocol Preprint. bio-protocol.org/preprint152.
2. Liang, W., Lin, C., Yuan, L., Chen, L., Guo, P., Li, P., Wang, W. and Zhang, X.(2019). Preactivation of Notch1 in remote ischemic preconditioning reduces cerebral ischemia-reperfusion injury through crosstalk with the NF-κB pathway. Journal of Neuroinflammation 16. DOI: [10.1186/s12974-019-1570-9](https://doi.org/10.1186/s12974-019-1570-9)

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